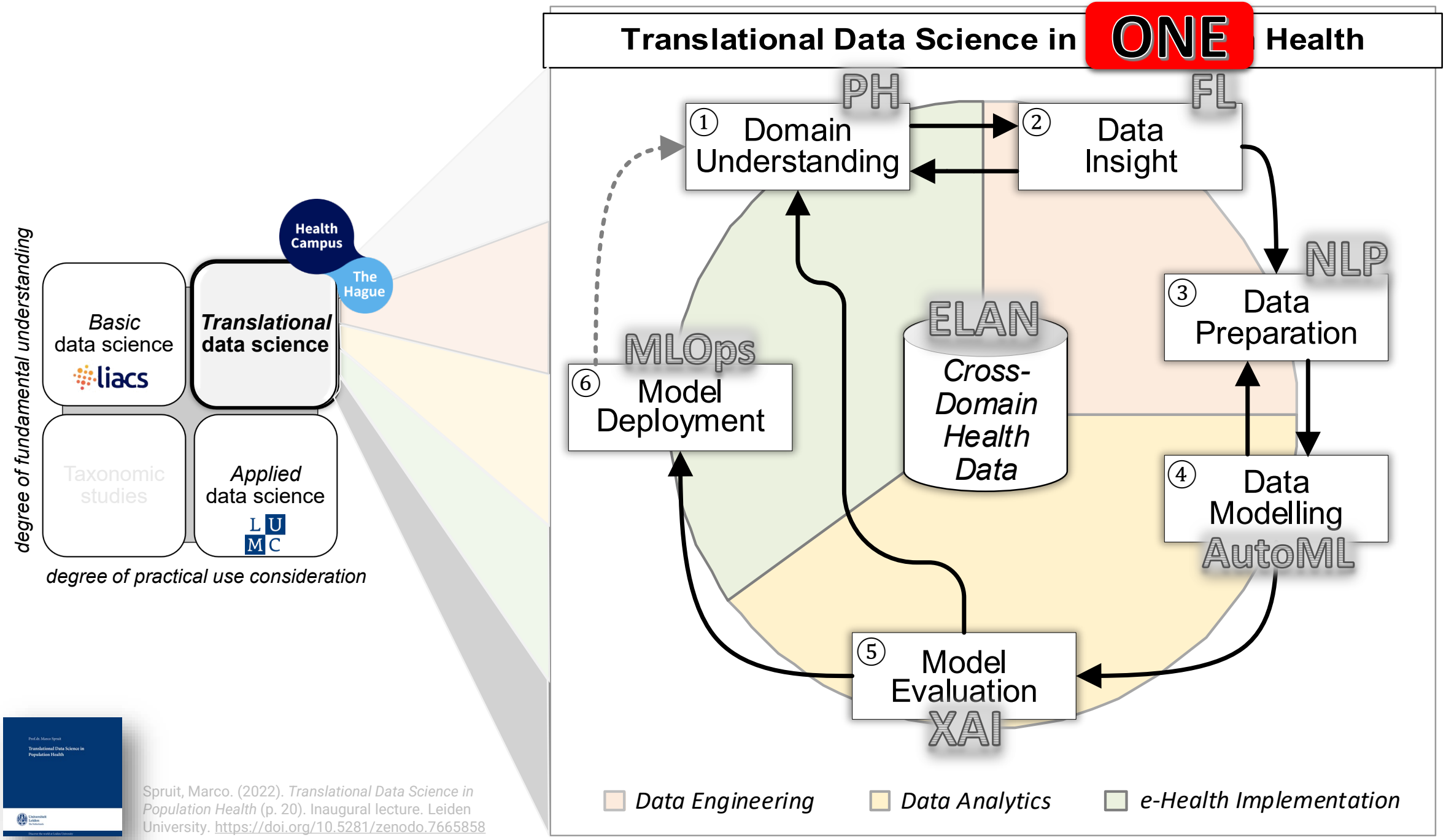
Health Campus Den Haag

One Health

An UNA Europa perspective

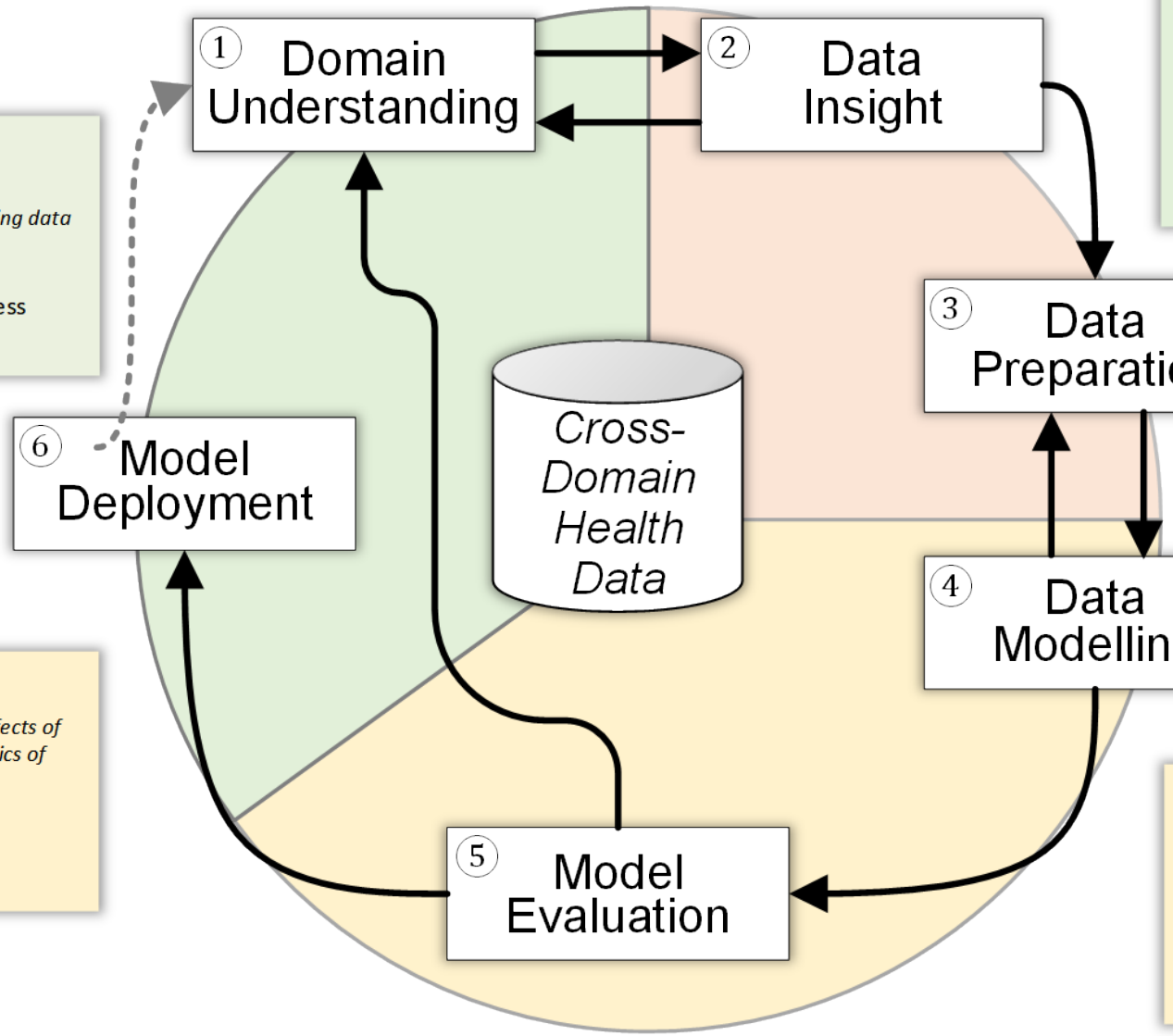
Leiden Association for PhD Candidates (LAP) Day: *Science and Beyond*

25 April 2025, Prof.dr. Marco Spruit



Spruit, Marco. (2022). *Translational Data Science in Population Health* (p. 20). Inaugural lecture. Leiden University. https://doi.org/10.5281/zenodo.7665858

Translational Data Science & AI LAB : Top-5 Projects *d.d. 19-3-2025*



Phaeton
Portable platform as a service for crowdsourced and privacy respecting data analysis and modeling

ZonMW Pandemic Preparedness
600K/200K EUR (LUMC/LIACS)

UNCAN-Connect
Decentralized Collaborative Network for Advancing Cancer Research and Innovation

Horizon Europe
30M/475K EUR (LIACS)

Welzijn.AI
Social Robotics for continuously monitoring mental wellbeing in the vulnerable elderly

<multiple proposals under review>
(LUMC/LIACS)

ECOTIP
Identifying tipping points of the effects of living environments on ecosyndemics of lifestyle-related illnesses

NWA-ORC
4.4M/300K EUR (LUMC)

INSAFEDARE
Innovative applications of assessment and assurance of data and synthetic data for regulatory decision support

Horizon Europe
4.8M/570K EUR (LUMC)

Data Engineering *Data Analytics* *e-Health Implementation*

http://tdslab.nl

Agenda

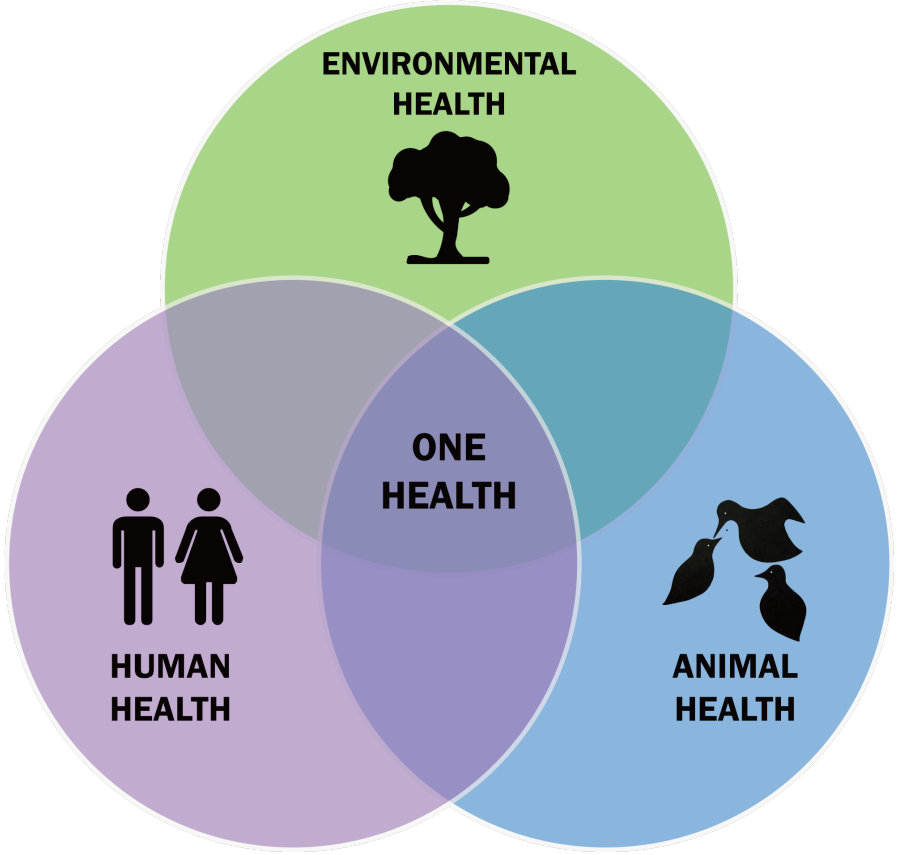
- What is One Health
- One Health vs Λ Health
- One Health < UNA Europa
- One Health & Data Science & AI

UNA Europa viewpoint

One Health

A global, holistic approach to major health-related challenges [1/3]

- One Health is a global movement that gained recent interest and promotes networked, ecological thinking about health.
- It recognises that the health of humans, animals, other organisms and the environment are inextricably intertwined with each other.
- Addressing major health challenges stemming from the complex interactions between humans, animals, plants and their environment requires recalibrating previous conceptual and methodological repertoires and tightening public-private-academic collaboration.



One Health

A global, holistic approach to major health-related challenges [2/3]

- Una Europa's approach to One Health aims to promote and consolidate transdisciplinary research, education and societal engagement initiatives across European and international partners.
- The objective is to better understand, integrate and act upon the complexity of health, social and ecological determinants.
- We advocate a global, holistic, and systems thinking approach towards major health-related challenges, whilst also recognising local diversity and inequalities, ultimately promoting the well-being of humans and animals in a sustainable and healthy environment.

One Health

A global, holistic approach to major health-related challenges [3/3]

- We do that
- by opening our doors,
- by sharing the results of our research as much as possible,
- by engaging with the general public,
- by turning any skepticism into hope, and
- by showing that universities can play a key role in building a sustainable future for people, the animals and our planet.

When did the term "One Health" first come up?

A. 1983

B. 1998

C. 2003

D. 2020

ELSEVIER

One Health
Volume 18, June 2024, 100678

Who coined the term “One Health”? Cooperation amid the siloization

Christina Pettan-Brewer [a c 1], Gillian Penn [b 1], Alexander W. Biondo [c], Thomas Jaenisch [d], Kim Grützmacher [e], Laura H. Kahn [f]

Show more

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https://doi.org/10.1016/j.onehlt.2024.100678

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Abstract

This short communication is an effort to describe and elucidate the trajectory of the modern historical concept of “One Health.” It is dedicated to the many integrated approaches of health closely related to One Health, while also recognizing the contribution and origination of One Health perspectives/notions from those that have led the way and spearheaded this movement while considering Indigenous cultures across the world. The effects of synergies of those involved in building these integrative approaches are potentially bigger and better lasting than the sum of the individual players. It is only through collaboration, cooperation and diplomacy that we can achieve impactful transformation to benefit health. In this commentary, we aim to appropriately and accurately describe how the current use of “One Health” came to be and who were the main players.

1 medicine >> 1 health

Literature sources reflect that the term “One Health” was first used publicly associated with the emergence of severe acute respiratory disease (SARS) in early 2003 and that the term was echoed and amplified in the goal-oriented strategic ‘Manhattan Principles’ in 2004 [18,19].

The authors questioned who it was that initially used the term “One Health.” One of the many origins that can be identified in 2003 is a published interview with William Karesh by Rick Weiss from the Washington Post [20]. The article focused on the decimation of Africa's gorilla and chimpanzee populations due to Ebola and the risk of cross over into humans due to the encroaching human populations into the forest:

> *“‘Human or livestock or wildlife health can’t be discussed in isolation anymore,’ Karesh said. ‘There is just one health. And the solutions require everyone working together on all the different levels’” [20].*

Other origins or sources need to be mentioned as well – for example Jakob Zinsstag was leading One Health transdisciplinary actions in the footsteps of Calvin Schwabe in the 1990's. The work of Zinsstag and colleagues early on in One Medicine (predecessor to One Health) involved pastoralist communities in Africa that set the building blocks and foundation for the

Is the following an example of One health?

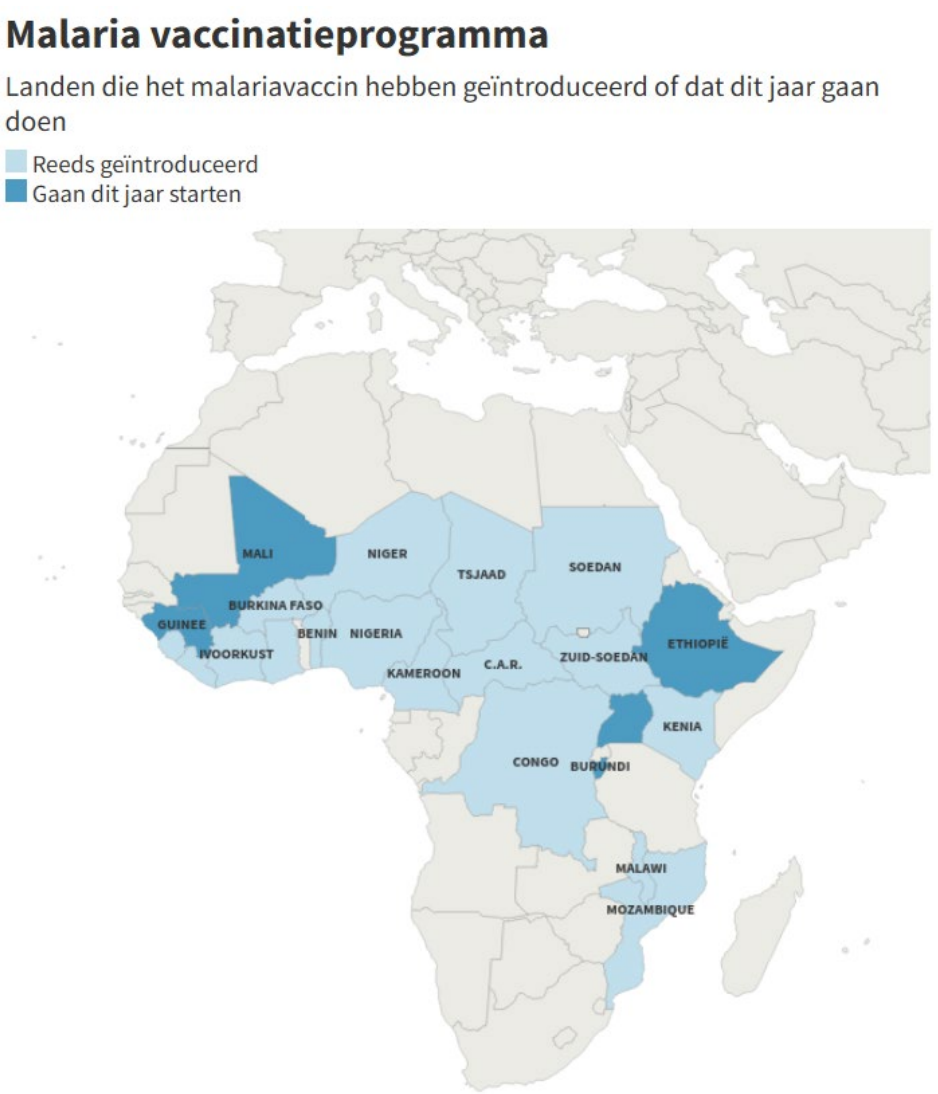
Foto Nybé Ponzio

REPORTAGE

Voor het eerst wordt een malariavaccin beschikbaar in Mali, mede dankzij hun eigen onderzoekers

Malaria in Mali Vanaf volgende maand worden in Mali kinderen gevaccineerd tegen malaria, een ziekte die het West-Afrikaanse land jaarlijks enkele duizenden levens kost. Die mijlpaal is mede te danken aan Malinese onderzoekers. „Dit is een droom die uitkomt."

Eva Oude Elferink
27 maart 2025 om 16:14 • Leestijd 10 minuten



https://archive.is/EVGVi

Interesting research topics in One Health?

- Zoonotic Disease Prediction
- Antimicrobial Resistance Surveillance
- Precision Agriculture and Food Safety
- Urban Health Surveillance
- …

AMR@ WHO

Antimicrobial resistance

21 November 2023

Key facts

- **Antimicrobial resistance (AMR) is one of the top global public health and development threats. It is estimated that bacterial AMR was directly responsible for 1.27 million global deaths in 2019 and contributed to 4.95 million deaths *(1)*.**
- **The misuse and overuse of antimicrobials in humans, animals and plants are the main drivers in the development of drug-resistant pathogens.**
- **AMR affects countries in all regions and at all income levels. Its drivers and consequences are exacerbated by poverty and inequality, and low- and middle-income countries are most affected.**
- **AMR puts many of the gains of modern medicine at risk. It makes infections harder to treat and makes other medical procedures and treatments – such as surgery, caesarean sections and cancer chemotherapy – much riskier.**
- **The world faces an antibiotics pipeline and access crisis. There is an inadequate research and development pipeline in the face of rising levels of resistance, and urgent need for additional measures to ensure equitable access to new and existing vaccines, diagnostics and medicines.**
- **In addition to death and disability, AMR has significant economic costs. The**

https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

EID@
WHO

World Health Organization | iris. Institutional Repository for Information Sharing

English

Search IRIS | Search

A brief guide to emerging infectious diseases and zoonoses

Export

Abstract

Description: Emerging infectious diseases (EIDs) are serious public health threats, globally as well as in the WHO South-East Asia Region. An emerging infectious disease is one that either has appeared and affected a population for the first time, or has existed previously but is rapidly spreading, either in terms of the number of people getting infected, or to new geographical areas. Many EIDs are zoonotic in origin, which means that the disease has emerged from an animal and crossed the species barrier to infect humans. Nipah virus, Crimean-Congo haemorrhagic fever and avian influenza A(H5N1) are examples of diseases that have recently emerged and have affected the WHO South-East Asia Region. Often humans may have little or no natural immunity to EIDs, so their impact, on health, society and the economy, are difficult to predict. This publication, developed by the WHO Regional Office for South-East Asia, is intended to serve as a reading source of key facts for non-technical persons who are interested in public health, such as policy-makers, non-health officials, media persons as well as the general public. It contains key information on 26 selected endemic, emerging and re-emerging infectious diseases and zoonoses affecting countries in the Region, or posing a potential threat to the Region. Each chapter starts with a general description of the type and severity of the infectious disease and how it is transmitted and spread, followed by an explanation of the risk factors for and symptoms of infection in humans. This is followed by recommendations on prevention, control and treatment. A glossary helps clarify technical terms, while for those interested in more information on a selected topic, references for further reading are also provided.

View/Open

B5123.pdf (2.248Mb)

View Statistics

Show Statistical Information

Altmetrics

World Health Organization

VBD@WHO

Vector-borne diseases

26 September 2024

Key facts

- Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 700 000 deaths annually. They can be caused by either parasites, bacteria or viruses.
- Malaria is a parasitic infection transmitted by *Anopheline* mosquitoes. It causes an estimated 249 million cases globally, and results in more than 608 000 deaths every year. Most of the deaths occur in children under the age of 5 years.
- Dengue is the most prevalent viral infection transmitted by *Aedes* mosquitoes. More than 3.9 billion people in over 132 countries are at risk of contracting dengue, with an estimated 96 million symptomatic cases and an estimated 40 000 deaths every year.
- Other viral diseases transmitted by vectors include chikungunya fever, Zika virus fever, yellow fever, West Nile fever, Japanese encephalitis (all transmitted by mosquitoes), tick-borne encephalitis (transmitted by ticks) and Oropouche fever (transmitted by Culicoides flies)
- Many of vector-borne diseases are preventable through protective measures and community mobilization.

Theoretical frameworks for studying One Health?

social-ecological systems (SES)

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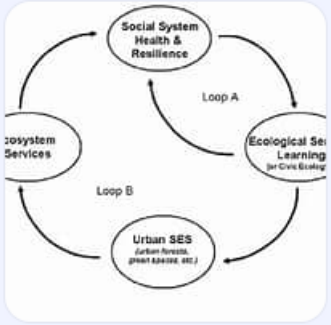
About 543,000 results

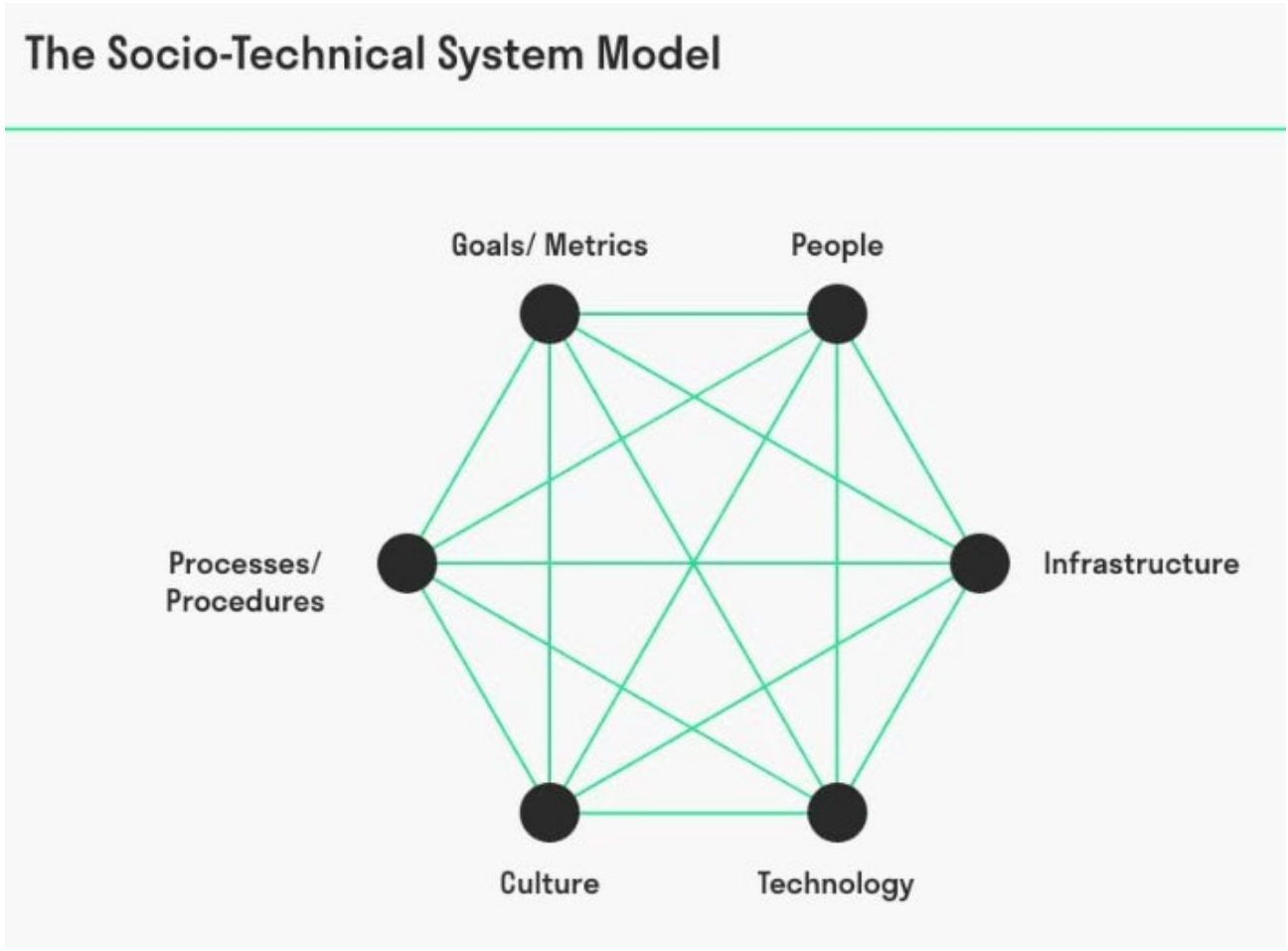
A social-ecological system (SES) is a **coherent system of biophysical and social factors that regularly interact in a resilient, sustained manner**. It is defined at several spatial, temporal, and organisational scales, which may be hierarchically linked. A social-ecological systems perspective provides a framework for understanding the complex dynamics occurring between environmental and societal changes. It highlights the intense dependency that society has on the natural environment. Wikipedia +2



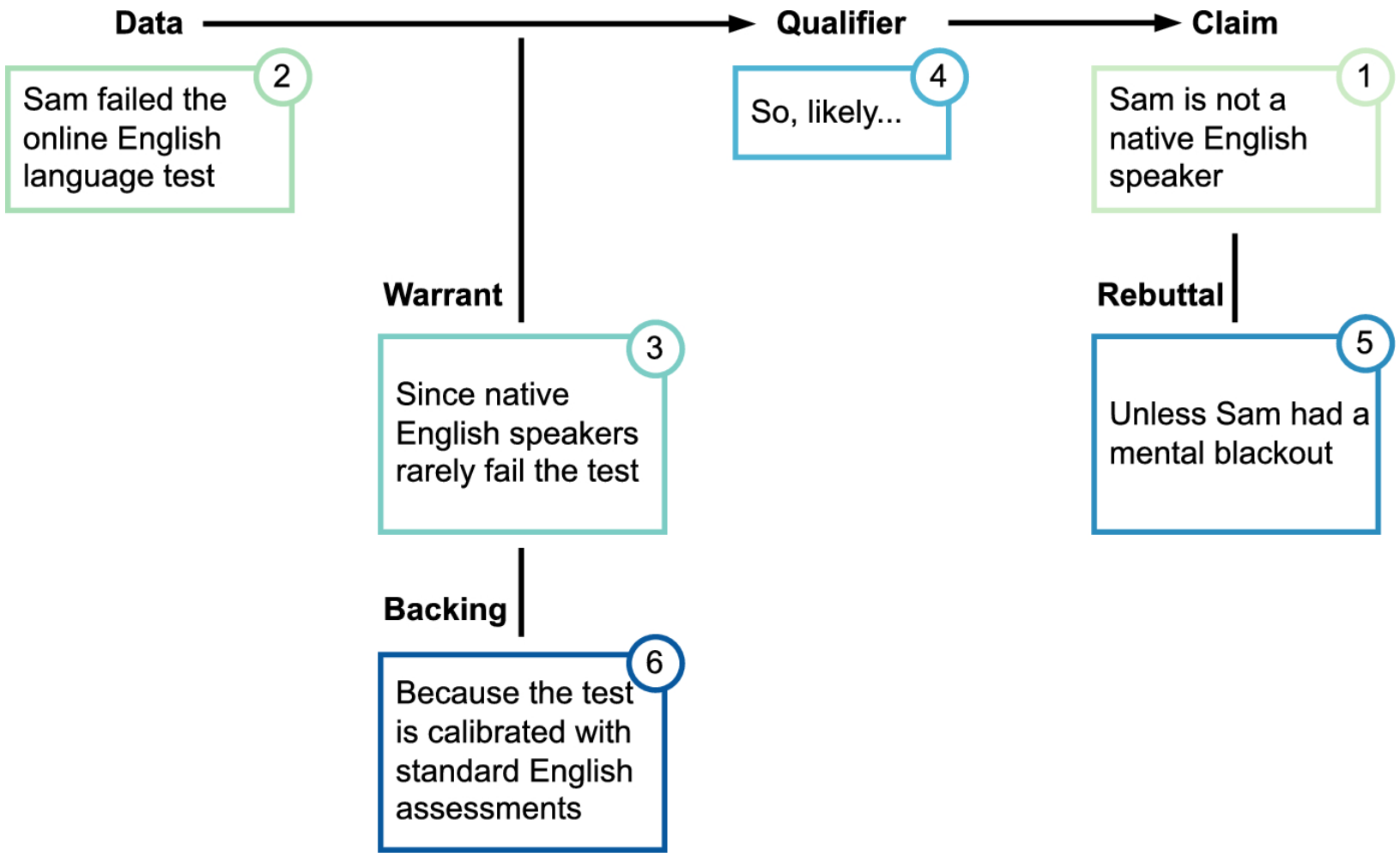
Socio-ecological system - Wikipedia
https://en.wikipedia.org › wiki › ...

The social-ecological system concept - Die Europäische...
https://ec.europa.eu › informati...

View all

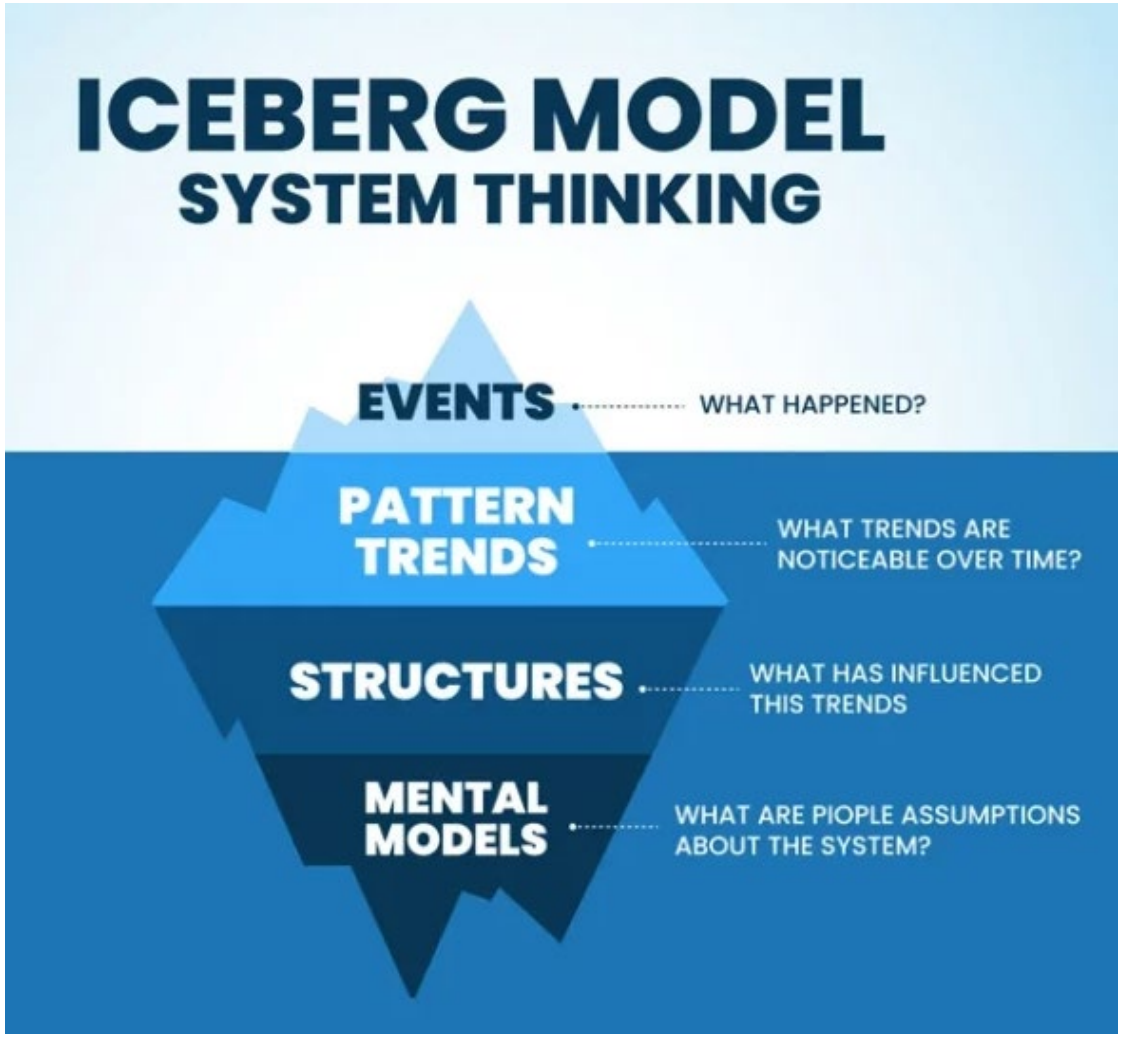


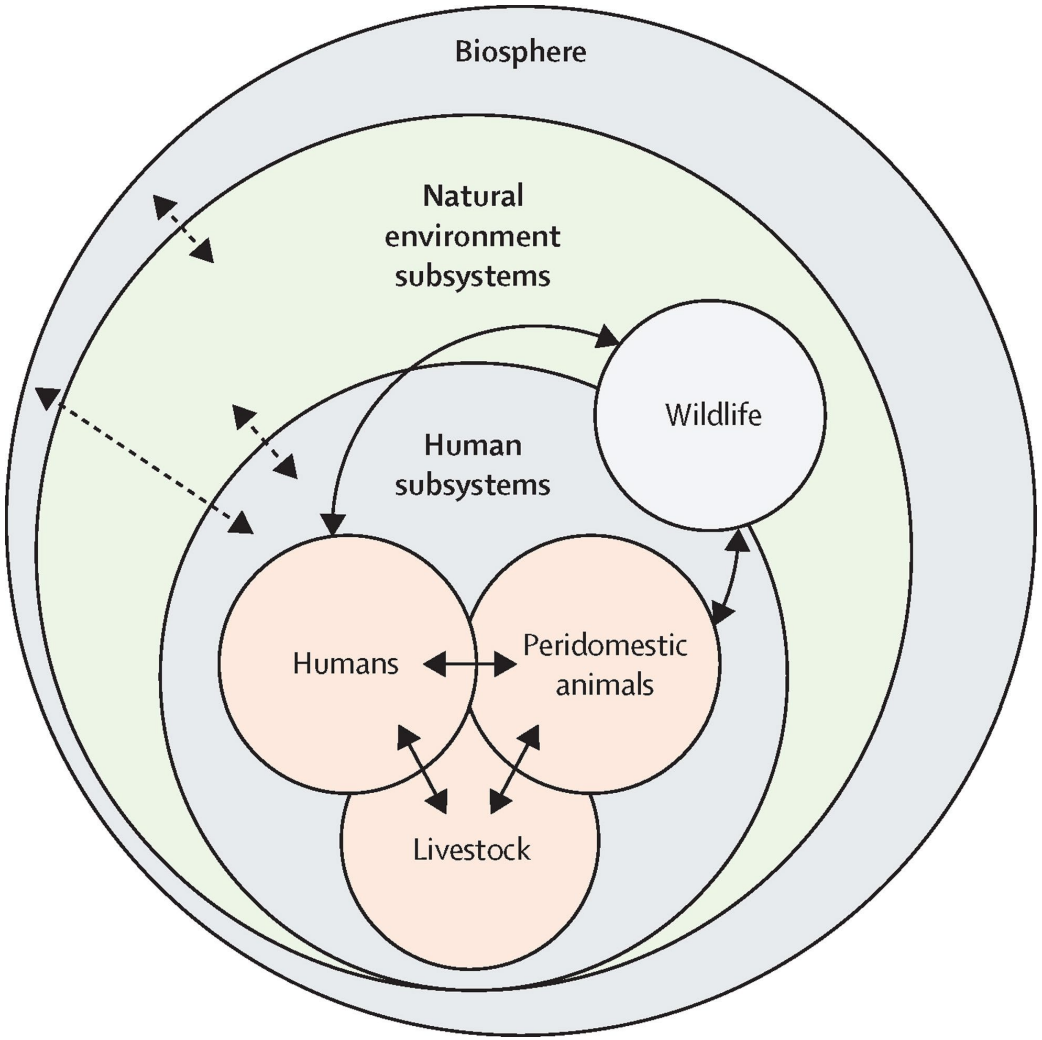
Or: Toulmin argument-based validation for SES?



https://doi.org/10.1007/s10257-023-00641-

Systems Thinking
(embeds Complex Adaptive Systems (CAS))





What are social-ecological systems (SES) characterized by?

A. The isolated interactions between human societies and the natural non-human environment.

B. The static and unchanging relationships between humans and animals.

C. The dynamic interplay between human societies and their surrounding environments, including natural resources, ecosystems, and landscape.

D. The independent roles played by human communities and natural ecosystems.

Agenda

- What is One Health
- One Health vs Λ Health
- One Health < UNA Europa
- One Health & Data Science & AI

One Health vs …

- "**Public health** is a subset of health care focused on improving the health outcomes and overall well-being of the public at large rather than individual patients. Used primarily to describe the health practices and policies of local and federal governments"

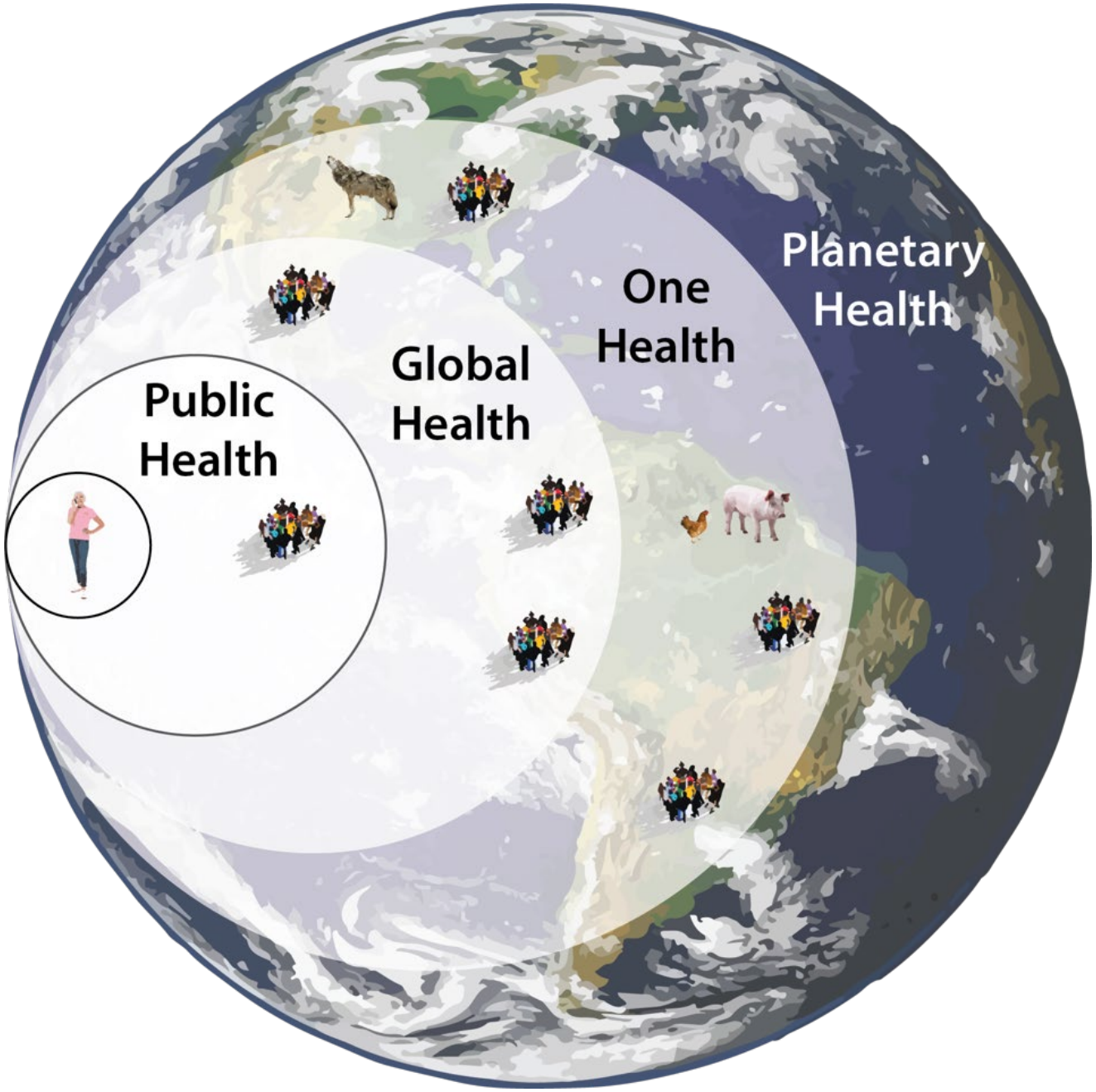
- **Λ Health ??**

https://www.coursera.org/articles/population-health-vs-public-health

One Health vs …

- "**Public health** is a subset of health care focused on improving the health outcomes and overall well-being of the public at large rather than individual patients. Used primarily to describe the health practices and policies of local and federal governments"

- ***Population health*** *is …*

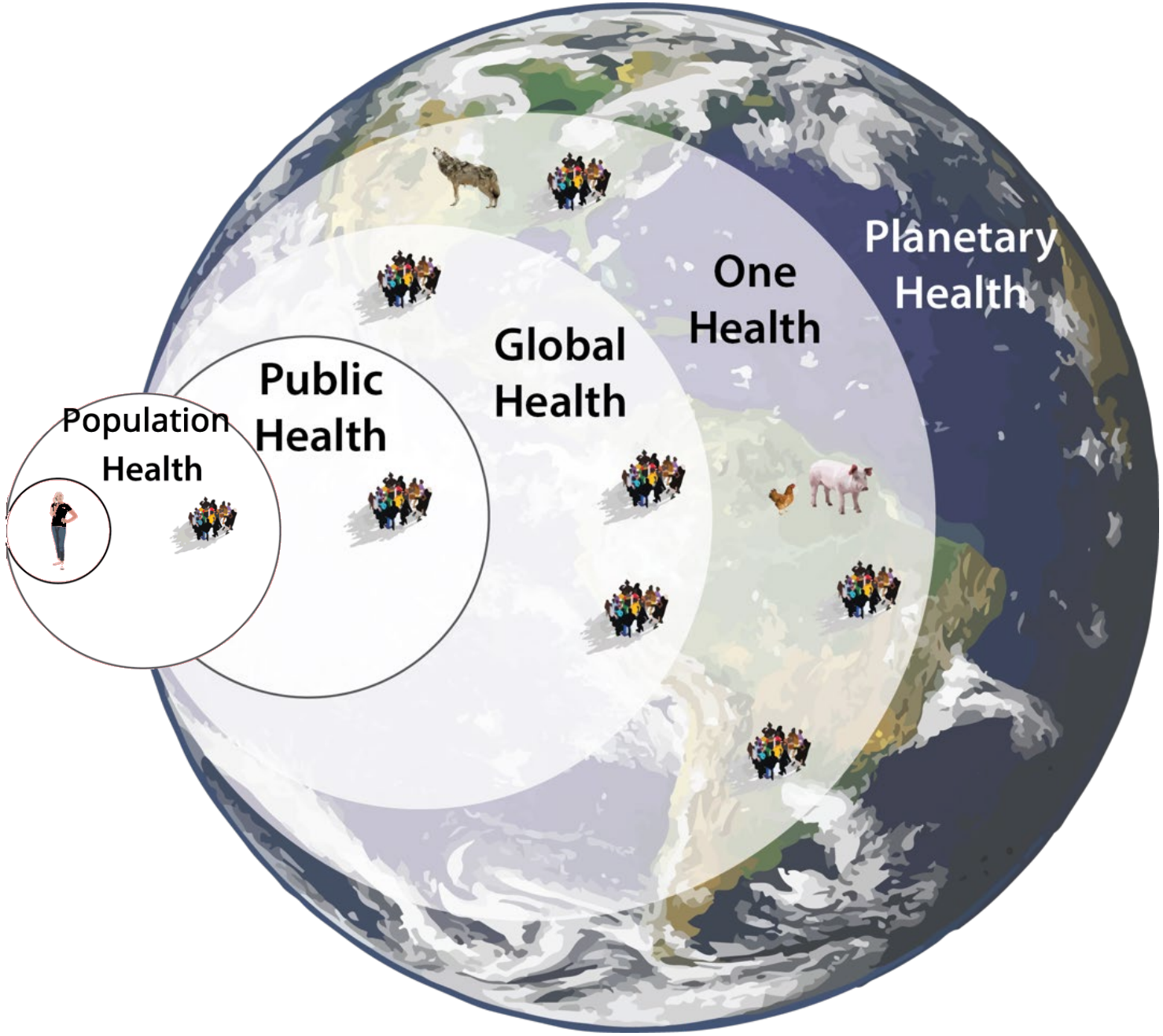


https://www.coursera.org/articles/population-health-vs-public-health

https://www.forbes.com/sites/johndrake/2021/04/22/what-is-planetary-health/

One Health vs…

- "**Population health** is a subset of public health focused on improving the well-being and health outcomes of a specific group of people or community within the public at large. […] Usually defined by such common demographic factors as geographic location, ethnicity, age, or a shared disability."



https://www.coursera.org/articles/population-health-vs-public-health

https://www.forbes.com/sites/johndrake/2021/04/22/what-is-planetary-health/

LUMC Strategic Plan 2024-2028

Strategy 2024-2028

Together we work to improve healthcare and people's health. This is what drives us. Every single day. With *Driven by health* we jointly provide direction for a future ready LUMC.

We strengthen our role as **innovator** by further integrating our core tasks research, education, care, and valorisation.

The **connection** between our core tasks is essential for the innovations arising from LUMC. In the connection with our patients and based on our role in society, we aim to contribute to progression. Therefore we join forces in LUMC, in the Netherlands and internationally.

- Our profile is **recognisable** and aligns with our scientific and clinical expertise. Our key areas are aligned with the focus areas of the Leiden Bio Science Park and Leiden University. We choose the following three key areas, also known as our societal outreach-themes:

- Regenerative medicine
- Population health
- Data driven healthcare & artificial intelligence (AI)

ULEI Interdisciplinary Research Themes 2020-2024

https://www.universiteitleiden.nl/en/research/interdisciplinary-programmes

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Universiteit Leiden

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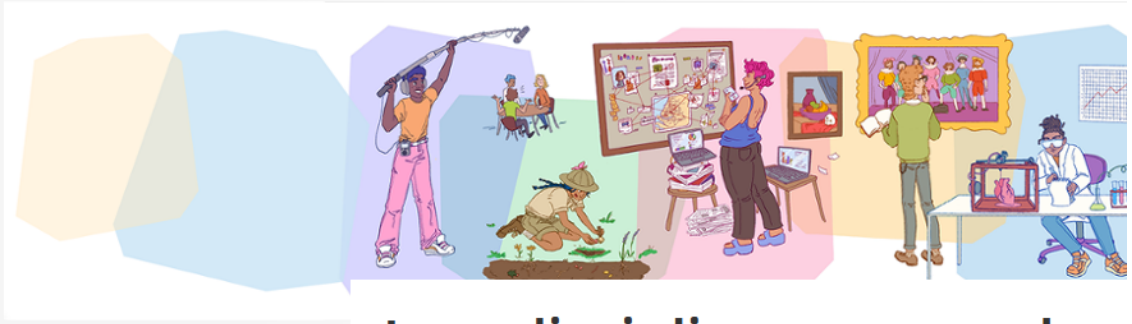
Home > Research > Interdisciplinary research and teaching



- Research
  - About our research
    - Interdisciplinary research and teaching
  - Institutes
    - Research projects
    - Research output
    - Research facilities
    - Research dossiers

Interdisciplinary research and teaching

Many of the challenges of our time are too complex to be resolved within the confines of a single discipline. Leiden University is a broad-based university where an incredible number of research fields converge. That makes us the ideal breeding ground for, and practitioners of, interdisciplinary research and teaching.

Population Health Living Lab The Hague

Analysing data to improve healthcare

The more medical data you gather about the health of particular groups of people - such as individuals who live in the same town or neighbourhood - the more you can learn about how the health of people in the group will develop in the long term. You can then use this knowledge at an early stage to treat or even prevent known conditions that crop up often in the group, such as heart complaints or psychological problems. This can lead to healthier people, lower healthcare costs and greater satisfaction, as well as improved self-reliance. Looking at the health of a group of people rather than an individual is known as: “Population Health”. How we handle the health of these groups within and outside the care system is termed: “Population Health Management”.

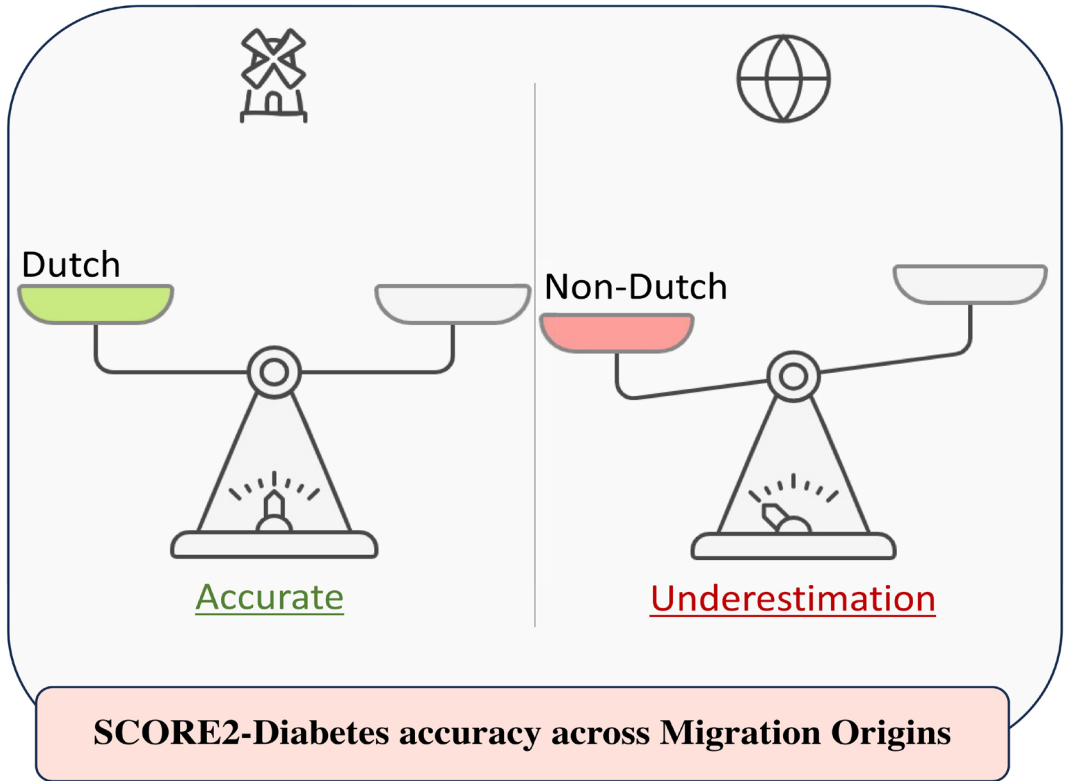
The “Population Health Living Lab” at Campus The Hague is a joint scientific workplace of doctors, researchers, regional partner organisations and healthcare providers inside and outside the hospital, supported by a databank of anonymous health data from people living in the region. Interdisciplinary research and teaching on “Population Health Management” also take place here. Health

Is the following an example of One Health?

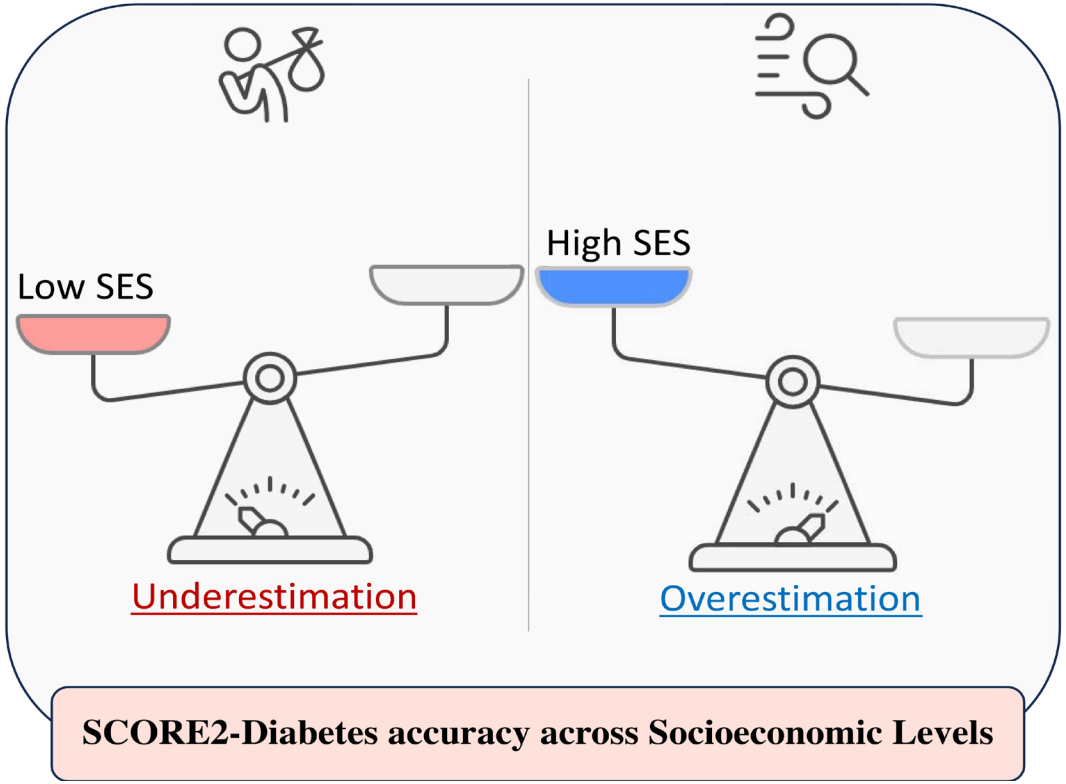
External Validation of SCORE2-Diabetes Across Migration Origins and Socioeconomic Levels

Key Finding: Model accuracy varied across migration origin and socioeconomic level (SES).

Data Source: ELAN primary care cohort (2007–2023) and Statistics Netherlands registry.
Study Population: 26,544 individuals with Type 2 diabetes, aged 40–79.
2,518 cardiovascular events were recorded.



SCORE2-Diabetes accuracy across Migration Origins

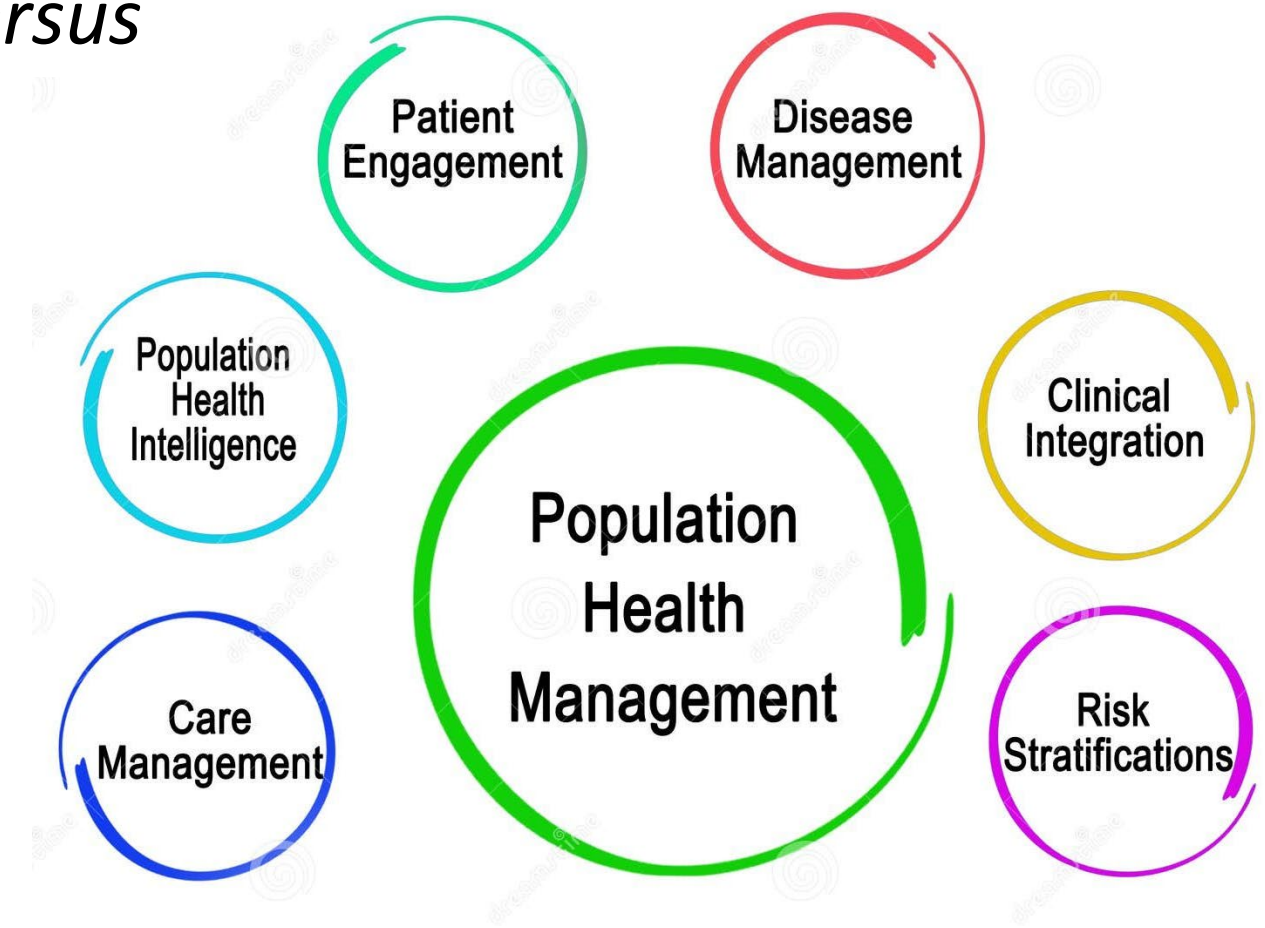


SCORE2-Diabetes accuracy across Socioeconomic Levels

Sukainah A Alfaraj, Janet M Kist, Rolf H H Groenwold, Marco Spruit, Dennis Mook-Kanamori, Rimke C Vos, External validation of SCORE2-Diabetes in The Netherlands across various socioeconomic levels in native-Dutch and non-Dutch populations, *European Journal of Preventive Cardiology*, 2024;, zwae354, https://doi.org/10.1093/eurjpc/zwae354

So… What do you think LUMC/ULEI/you should do?

versus



Agenda

What is One Health

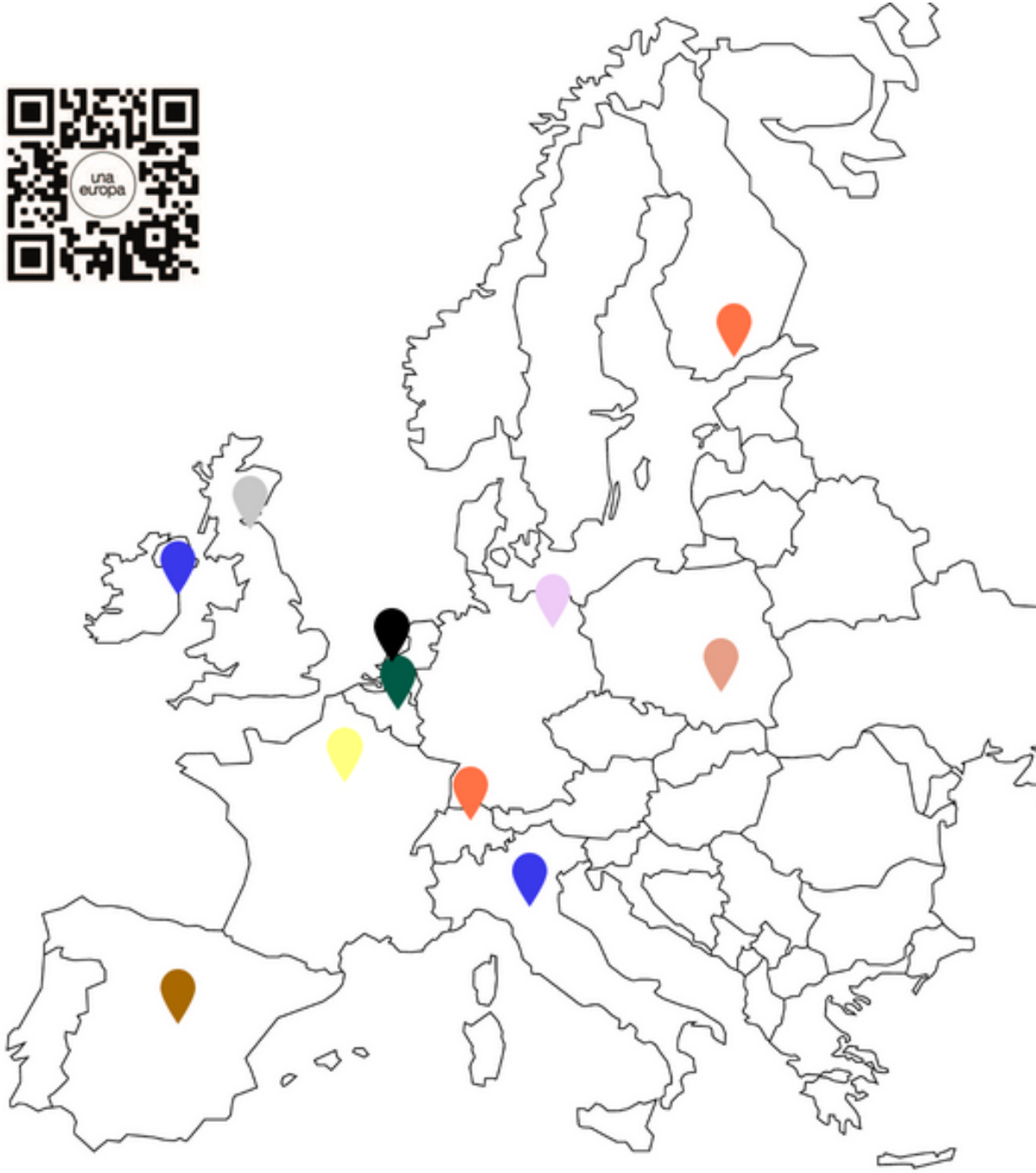
One Health vs Λ Health

One Health < UNA Europa

One Health & Data Science & AI

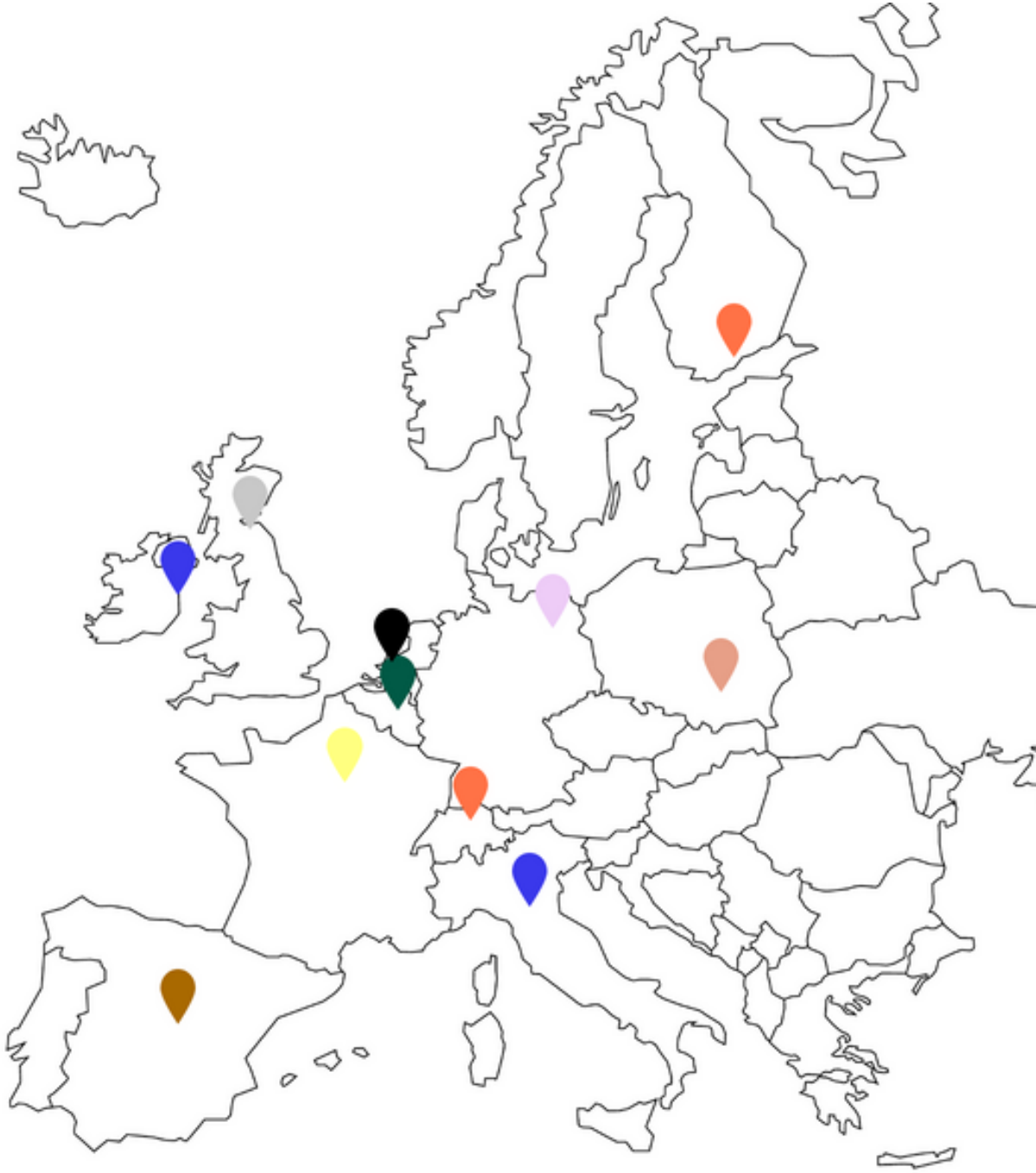
UNA Europa

1. Freie Universität Berlin
2. Università di Bologna
3. University College Dublin
4. University of Edinburgh
5. Helsingin universitet
6. Uniwersytet Jagielloński w Krakowie
7. Universiteit Leiden
8. KU Leuven
9. Universidad Complutense de Madrid
10. Université Paris 1 Panthéon-Sorbonne
11. Universität Zürich



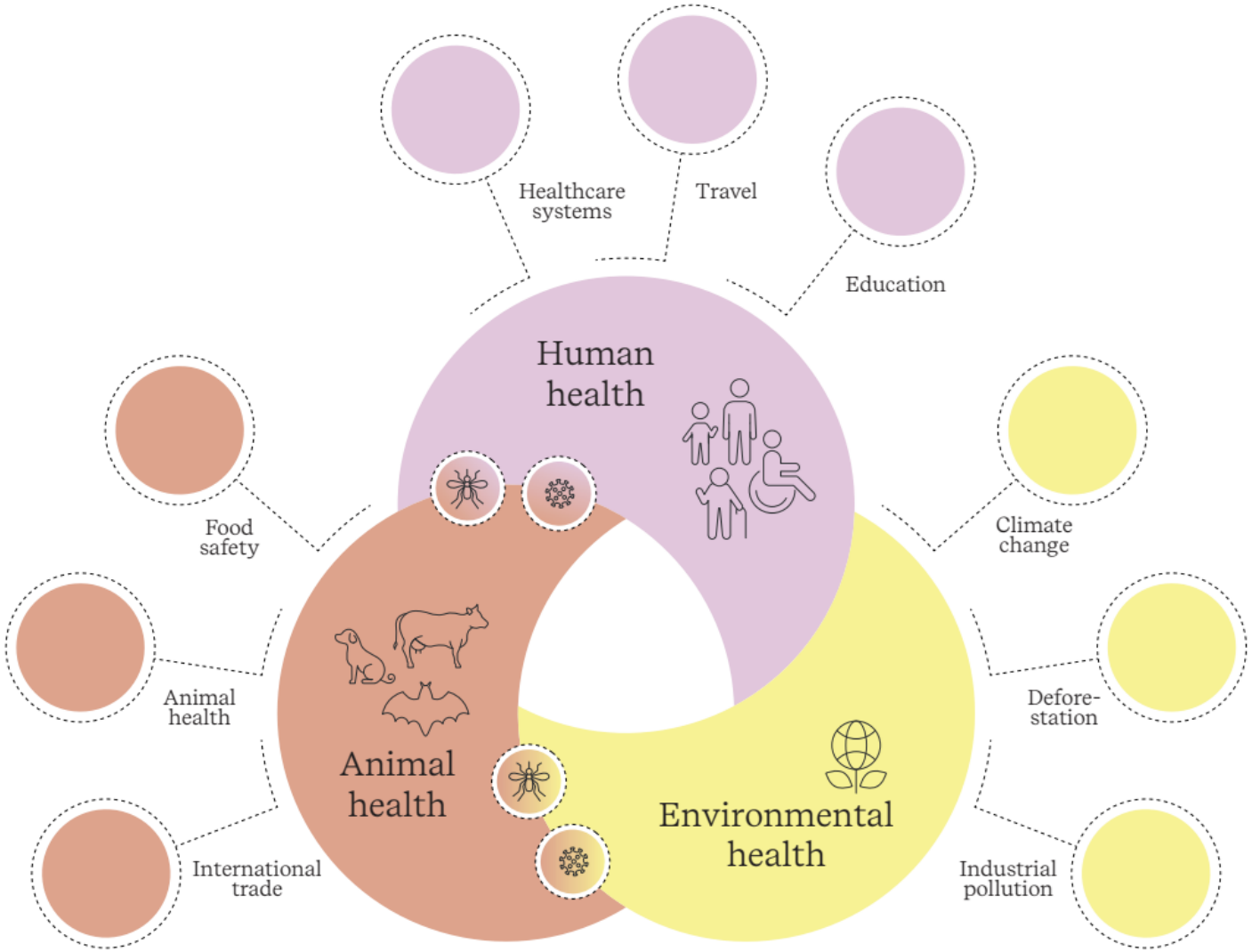
UNA Europa: Mission

- To draw on our collective strengths
- To create a truly European inter-university environment:
- A University of the Future, that is global, sustainable, borderless, and inclusive.



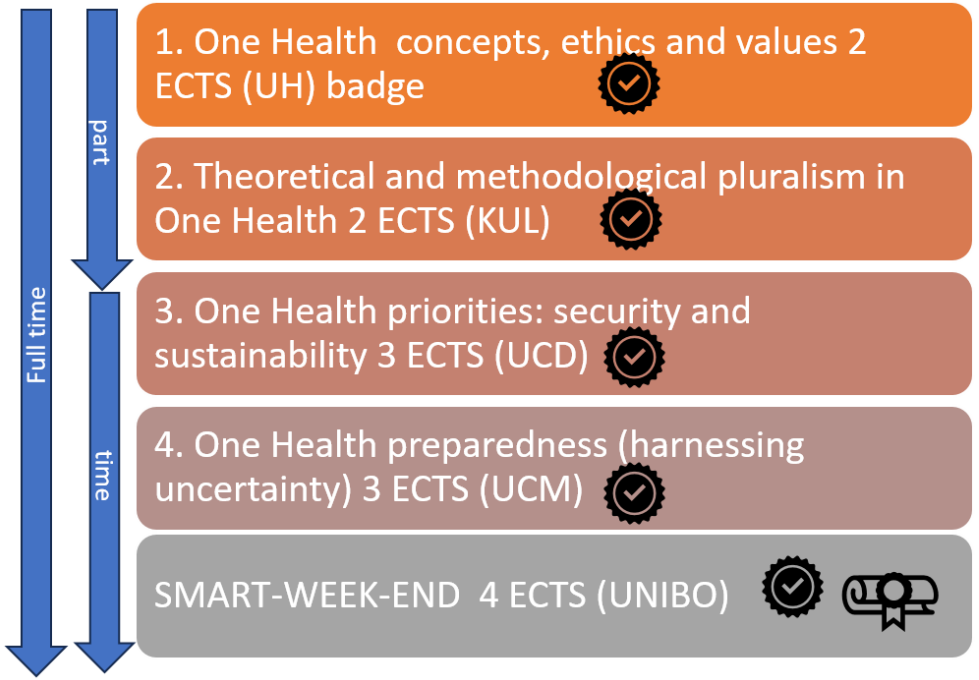
UNA Europa: Self-Steering Committee One Health

Creating a logo for our One Health SSC: FAILED 😁



LIFELONG LEARNING: **CERTIFICATE**
ONE HEALTH IN GOVERNANCE

Module1: Values from human &
children rights perspective (Mirjam)
Module2: AI (Marco)
Module4: Governance (Jet)



efsa
European Food Safety Authority

ECHA
EUROPEAN CHEMICALS AGENCY

EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

ecdc
EUROPEAN CENTRE FOR DISEASE PREVENTION AND CONTROL

European Environment Agency

Food and Agriculture Organization of the United Nations

UN environment programme

World Health Organization

World Organisation for Animal Health
Founded as OIE

2025: Collaboration between SSC OH and DSAI (shared MSc?)

una europa

New Module to the AI and Society MOOC

One Health

Discover how AI technologies can help tackle some of the world's most pressing health challenges.

Join the course to learn more!

https://courses.mooc.fi/org/uh-cs/courses/ai-in-society

Co-funded by the European Union

In what ways can AI contribute to the prediction and monitoring of risks of vector-borne diseases?

A. By analyzing traffic patterns in urban areas
B. By monitoring temperature and humidity
C. By tracking bird migration patterns
D. By analyzing agricultural practices

One Health Literacy
to address Global Health Challenges

ELSEVIER

Health Policy
Volume 143, May 2024, 105042

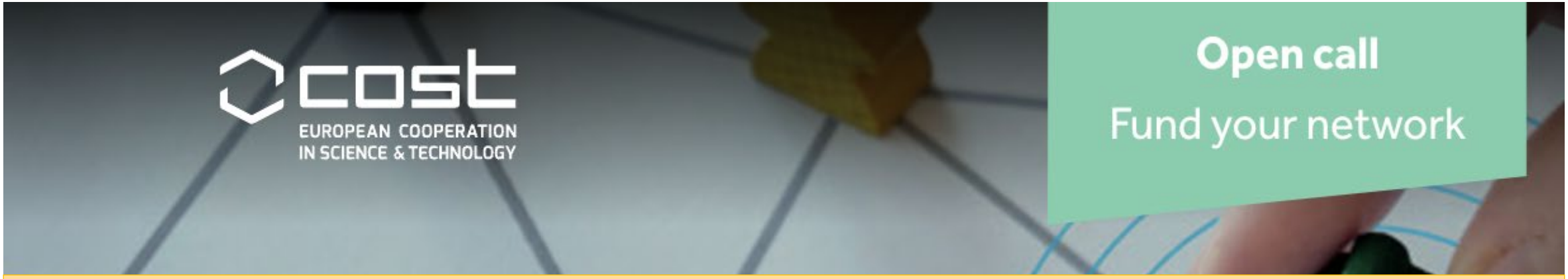
Policy Comment

Health literacy, governance and systems leadership contribute to the implementation of the One Health approach: a virtuous circle

Carl Rudolf Blankart [a b c], Saskia Maria De Gani [d e], Helen Crimlisk [f g h], Mario Desmedt [i], Birgit Bauer [j], Gerardine Doyle [k l]

"We define One Health literacy as the knowledge, motivation and competencies to access, understand, appraise and apply all relevant information that are related to One Health in order to make judgments, take decisions and actions in everyday life concerning healthcare, disease prevention and health promotion to sustainably balance the health and quality of life of us humans, the animals and the environment."

Funding opportunities



SystOHm *MRQ: "How can we integrate the diverse methods of systems thinking into a structured framework that supports practical One Health implementation, while maintaining strong theoretical consistency and a robust knowledge base? What innovations can make systems thinking accessible to a broad range of researchers and stakeholders, ensuring meaningful impacts cross different contexts?"*

---

245 proposers at submission, connecting 50 countries (35 in Europe) and 4 international organizations

Funding opportunities II

Minor Sustainable Health and Care → Una Europa Seed Funding (2024)

An interdisciplinary and transnational Bachelor minor Sustainable Health and Care including the topics One Health and Sustainability.

"The objective is to develop an interdisciplinary and international minor on Sustainable Health and Care for Bachelor students. This minor will be grounded on three pillars:

1. **One Health**, which revolves around a holistic and integrated health improvement;
2. **Population Health Management**, which stresses the relevance of demographic studies and policymaking in setting up modern health services; and
3. **Sustainability**, which is meant to provide the tools that students need to think about health issues in long-term perspectives"

The ULEI project group consists of academic employees from 5 different faculties (Law, Humanities, FFGA, Science and Medicine), with the Faculty of Medicine (Dr. Martijn Sijbom) being the lead. Additionally, early career researchers from different disciplines working at five Una Europa universities (Madrid, Dublin, Krakow, Leuven, Leiden) […] An outline for a minor will be developed to apply for Erasmus+ cooperation partnership funding.

One-Pager

Stakeholders
Companies
NGOs
Local Governments

One Health

A global, holistic approach to major health-related challenges

una europa

One Health is a global movement that gained recent interest and promotes networked, ecological thinking about health. It recognises that the health of humans, animals, other organisms and the environment are inextricably intertwined with each other. Addressing major health challenges stemming from the complex interactions between humans, animals, plants and their environment requires recalibrating previous conceptual and methodological repertoires and tightening public-private-academic collaboration.

Una Europa's approach to One Health aims to promote and consolidate transdisciplinary research, education and societal engagement initiatives across European and international partners. The objective is to better understand, integrate and act upon the complexity of health, social and ecological determinants. We advocate a global, holistic, and systems thinking approach towards major health-related challenges, whilst also recognising local diversity and inequalities, ultimately promoting the well-being of humans and animals in a sustainable and healthy environment.
We do that by opening our doors, by sharing the results of our research as much as possible, by engaging with the general public, by turning any skepticism into hope, and by showing that universities can play a key role in building a sustainable future for people, the animals and our planet.

Una Europa's six Focus Areas: inspiration, not limitation

Una Europa's six Focus Areas – Cultural Heritage, Data Science and Artificial Intelligence, Europe and the World, Future Materials, One Health, and Sustainability and Climate Protection – reflect pressing global and societal challenges. Inherently interdisciplinary and transdisciplinary, they are designed to bring together experts in a wide range of fields to find new ways of collaboratively conducting the research of the future and forging new paths in education and societal outreach.
The Focus Areas are intended to inspire researchers, not limit them, and they are designed to harness and promote international cooperation to find collective solutions, rather than working separately. Una Europa encourages novel and diverse perspectives on challenges broadly attached to the Focus Areas, proposing collaborative projects in research, education and societal outreach, from whichever fields these emerge.

Bruno González Zorn
Chair, Una Europa One Health Self Steering Committee
Email: bgzorn@ucm.es

Our Collaboration Experience

MSD | una europa

Una Europa One Health webinar

One Health aspects of human companion-animal bond

Friday 22 November | 12:00-13:30CET

2025 @Berlin - Una Europa Summer School

Bridging Disciplines for One Health Solutions

15-20 June

FREIE UNIVERSITÄT BERLIN

Universiteit Leiden

Venue: Veterinarium Progressum

8th world one health CONGRESS

CAPE TOWN SOUTH AFRICA 2024

una europa

“The Una Europa Alliance: Strengthening One Health through Universities”

UNIVERSITY LOUNGE PARTNERSHIP

Fellowships ECR

Fellowships Africa

USA One Health University Alliance

2025 etc

New cooperations…

EUGLOH

Global One Health Community

Una Europa–Africa Partnership Seed Funding Call 2023/2024

Establishing a One Health Institute?

Universiteit Leiden

Search for subject or person | All | NL | EN

Menu | *Staff website* | Leiden Institute of Advanced Computer Science (LIACS)

Staff website > Events > Una Europa FAIR Data Hackathon for PhD Candidates

Hackathon & Conference

Una Europa FAIR Data Hackathon for PhD Candidates

Date: Monday 21 April 2025 - Friday 25 April 2025

Address: In Leiden (exact location to be confirmed)

Boost your FAIR data expertise, share your research with peers and develop your international network!

This opportunity is open to doctoral researchers at participating Una Europa partner universities, including Leiden University and LUMC.

Una Europa @ Leiden University

Seed Funding. Summer schools. Exchange programmes.

These are just some of the many opportunities open to Leiden University employees and students, thanks to our participation in the Una Europa alliance.

Learn more >

Agenda

What is One Health

One Health vs Λ Health

One Health < UNA Europa

One Health & Data Science & AI

A Shared MSc in Data Science & AI

- A two year Erasmus Mundus Joint master program on Applied Data Science (MADS)
- Universities of Madrid, Bologna, Paris, Dublin, Helsinki and Leiden
- Wíth a One Health track
- *Leiden lead:* Prof.dr. Mark de Rooij *et al.*

To conclude, one more recent example….

JMIR Publications
Advancing Digital Health & Open Science

Articles | Search articles

Journal of Medical Internet Research | Journal Information | Browse Journal

Published on 04.10.2023 in Vol 25 (2023)

Preprints (earlier versions) of this paper are available at https://preprints.jmir.org/preprint/49944, first published June 14, 2023.

A Natural Language Processing Model for COVID-19 Detection Based on Dutch General Practice Electronic Health Records by Using Bidirectional Encoder Representations From Transformers: Development and Validation Study

Maarten Homburg[1]; Eline Meijer[1,2]; Matthijs Berends[1,3,4]; Thijmen Kupers[1,2]; Tim Olde Hartman[5]; Jean Muris[6]; Evelien de Schepper[7]; Premysl Velek[7]; Jeroen Kuiper[8]; Marjolein Berger[1]; Lilian Peters[1,2,9]

https://www.jmir.org/2023//e49944/

AI-model ontdekt infectie-uitbraken vóór labdetectie

Delen via:

Een slim taalmodel signaleert infectie-uitbraken zoals COVID-19 en RSV al weken voordat laboratoria of surveillance het opmerken. ERNIE doet dat zonder vooraf ingestelde ziektelabels of laboratoriumtests. Het AI-model spoort vroegtijdig afwijkende ziektebeelden op op basis van patronen in huisartsendossiers.

2 min
apr 2025
Naomi van Esschoten

Dankzij deze 'ziekte-agnostische' aanpak kunnen onbekende of atypische infectie-uitbraken in een vroeg stadium worden herkend, puur op basis van wat huisartsen dagelijks noteren in het dossier, vertelt computationeel taalkundige Gijs Danoe van het UMCG. "Huisartsen leggen consultgegevens gedetailleerd vast, inclusief klachten en observaties. Deze vrije tekst wordt zelden gebruikt voor infectieziektesurveillance, terwijl het een rijke bron van informatie vormt."

Bert en Ernie

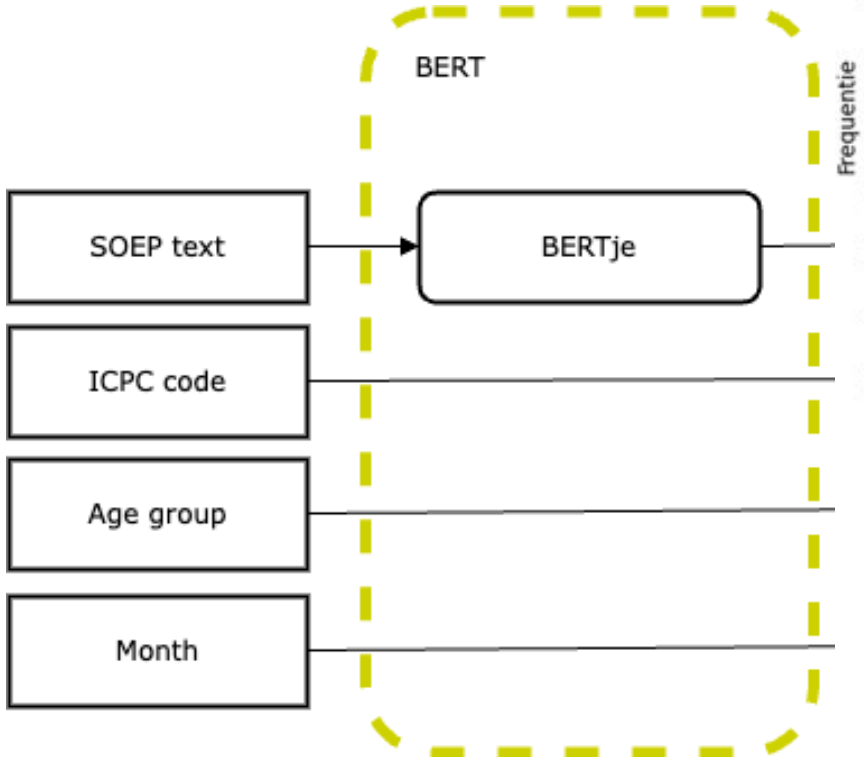
Het model ERNIE (Early Recognition using Neural Information Encoding), gebouwd op het taalmodel BERT (Bidirectional Encoder Representations from Transformers),[2] analyseert vrije tekst uit huisartsgegevens via 4 stappen: 1) signaleren van afwijkende consultpatronen, 2) groeperen van soortgelijke consulten, 3) extraheren van kenmerkende trefwoorden en 4) geografisch en demografisch visualiseren van de uitbraak.

Vakgebieden:
Huisartsgeneeskunde, Infectieziekten

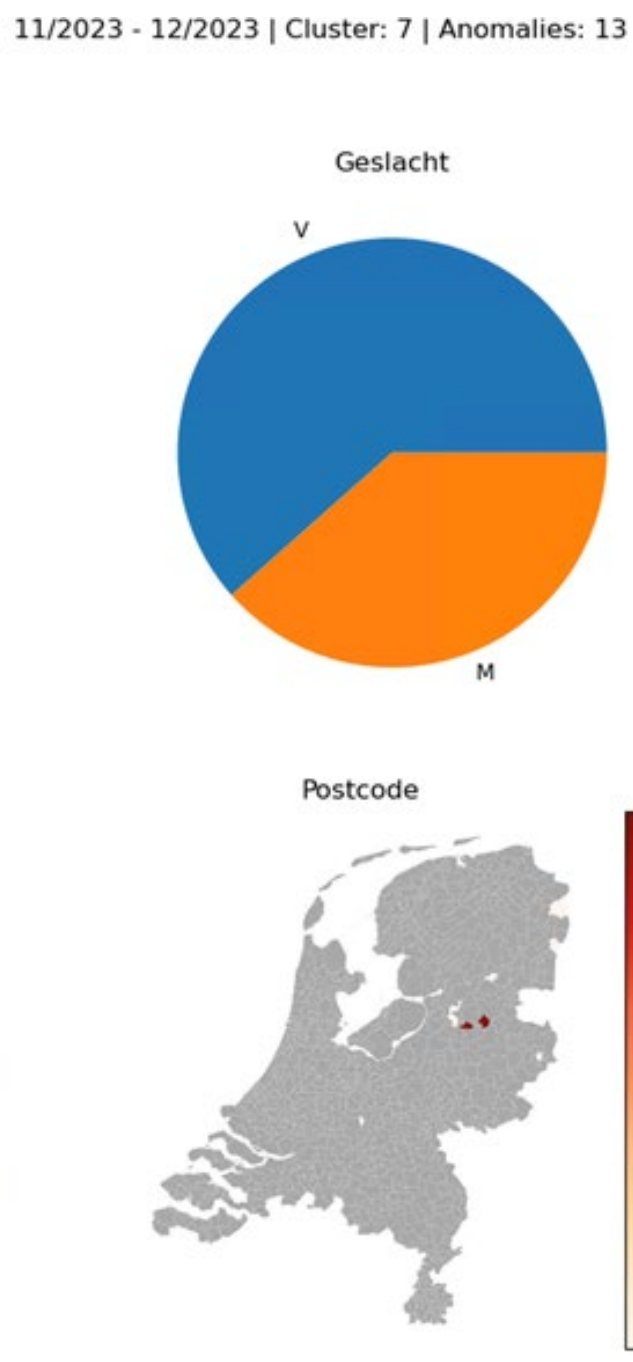
Aandachtsgebieden:
Vaccinatie, Virale infecties

Tags:
artificiële intelligentie, COVID-19, respiratoir syncytieel virus

https://www.mednet.nl/congres-nieuws/ai-model-ontdekt-infectie-uitbraken-voor-labdetectie/



Flowchart of the model.



Example of cluster output (West Nile virus); including age distribution, sex distribution, the TF-IDF topic word cloud and the geographical distribution.

Translational Data Science & AI LAB : Top-5 Projects *d.d. 19-3-2025*

Phaeton
Portable platform as a service for crowdsourced and privacy respecting data analysis and modeling

ZonMW Pandemic Preparedness
600K/200K EUR (LUMC/LIACS)

ECOTIP
Identifying tipping points of the effects of living environments on ecosyndemics of lifestyle-related illnesses

NWA-ORC
4.4M/300K EUR (LUMC)

UNCAN-Connect
Decentralized Collaborative Network for Advancing Cancer Research and Innovation

Horizon Europe
30M/475K EUR (LIACS)

Welzijn.AI
Social Robotics for continuously monitoring mental wellbeing in the vulnerable elderly

<multiple proposals under review>
(LUMC/LIACS)

INSAFEDARE
Innovative applications of assessment and assurance of data and synthetic data for regulatory decision support

Horizon Europe
4.8M/570K EUR (LUMC)

Data Engineering *Data Analytics* *e-Health Implementation*

http://tdslab.nl